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Practitioner's Docket No. LAR-15816-2

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In application of: William K. Wilkie, Robert G. Bryant, Robert L. Fox, Richard F. Hellbaum,  
James W. High, Antony Jalink, Jr., Bruce D. Little, & Paul H. Mirick

Application No.: 10/653,824

Filed: September 3, 2003

For: Piezoelectric Composite Apparatus And A Method For Fabricating The Same

Mail Stop Amendment

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

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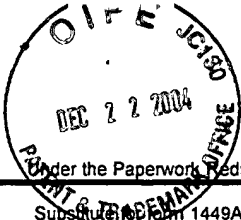
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Date: DECEMBER 22, 2004

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**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

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Sheet 1 of 2

**Complete if Known**

Application Number	10/653,824
Filing Date	09/03/2003
First Named Inventor	W. Keats Wilkie
Art Unit	
Examiner Name	
Attorney Docket Number	LAR-15816-2

**U. S. PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code <sup>2</sup> (if known)			
	1	US- 4,250,603	02/17/1981	Honeywell, Inc.	
	2	US- 4,479,069	10/23/1984	Hewlett-Packard Company	
	3	US- 4,613,784	09/23/1986	U.S. Navy	
	4	US- 4,747,192	05/31/1988	Kabushiki Kaisha Toshiba	
	5	US- 4,939,826	07/10/1990	Hewlett-Packard Company	
	6	US- 5,239,736	08/31/1993	Acuson Corporation	
	7	US- 5,340,510	08/23/1994	Materials Systems Inc.	
	8	US- 5,471,721	12/05/1995	Research Corporation Technologies, Inc.	
	9	US- 5,527,480	06/18/1996	Martin Marietta Corporation	
	10	US- 5,539,965	07/30/1996	Rutgers, The University of New Jersey	
	11	US- 5,645,753	07/08/1997	Kyocera Corporation	
	12	US- 5,656,882	08/12/1997	Active Control Experts, Inc.	
	13	US- 5,687,462	11/18/1997	Active Control Experts, Inc.	
	14	US- 5,692,279	12/02/1997	Motorola	
	15	US- 5,702,629	12/30/1997	AlliedSignal, Inc.	
	16	US- 5,849,125	12/15/1998	Stephen E. Clark	
	17	US- 5,860,202	01/19/1999	Brother Kogyo Kabushiki Kaisha	
	18	US- 5,869,189	02/09/1999	Massachusetts Institute of Technology	

**FOREIGN PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>6</sup>
		Country Code <sup>3</sup> Number <sup>4</sup> Kind Code <sup>5</sup> (if known)				

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Sheet 2 of 2

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Attorney Docket Number	LAR-15816-2

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		Number-Kind Code <sup>2</sup> (if known)				
	19	US-	5,874,868	02/23/1999	Murata Manufacturing, Co., Ltd.	
	20	US-	5,977,691	11/02/1999	Hewlett-Packard Company	
	21	US-	6,014,898	01/18/2000	Parallell Design, Inc.	
	22	US-	6,038,752	03/21/2000	Parallell Design, Inc.	
	23	US-	6,043,588	03/28/2000	Murata Manufacturing, Co., Ltd.	
	24	US-	6,048,622	04/11/2000	Massachusetts Institute of Technology	
	25	US-	6,069,433	05/30/2000	Active Control Experts, Inc.	
	26	US-	6,088,894	07/18/2000	Tetrad Corporation	
	27	US-	6,255,761 B1	07/03/2001	U.S. Navy	
	28	US-	6,404,107 B1	06/11/2002	Active Control Experts, Inc.	
	29	US-	6,489,706 B2	12/03/2002	Acuson Corporation	
	30	US-	6,629,341 B2	10/7/2003	NASA	
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Application Number	10/653,824
Filing Date	09/03/2003
First Named Inventor	W. Keats Wilkie
Art Unit	
Examiner Name	
Attorney Docket Number	LAR-15816-2

Sheet 1 of 1

**NON PATENT LITERATURE DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
	1	Hagood, N.W., and Bent, A. A., "Development of piezoelectric fiber composites for structural actuation", Proceedings of the 34th AIAA Structures, Structural Dynamics, and Materials Conference, AIAA Paper No. 93-1717, LaJolla, CA, 1993, pgs. 3625-3638.	
	2	Wilkie, W. K et al., "Low-cost piezocomposite actuator for structural control applications," Smart Structures and Materials, 2000: Industrial and Commercial Applications of Smart Structures Technologies, SPIE Vol. 3991, (2000), pgs. 323-334.	
	3	Janos, B. Z. Et al., "A Magnetic particle doping for anisotropic matrix materials in active fiber composites," Smart Materials Technologies, Newport Beach, CA, SPIE Vol 3675, (March 1999), pgs. 10-21.	
	4	MIDE Technology Corporation, Product Information Sheet, "Flexible Piezoelectric Technology," 8/99, pgs. 1-2.	
	5	A. A. Bent, "Active fiber composite material systems for structural control applications", SPIE Proceedings, Newport Beach, CA, March 2-4, 1999, pgs. 166-177.	
	6	A. A. Bent et al., "Improved performance in piezoelectric fiber composites using interdigitated electrodes," SPIE Vol. 2441, San Diego, CA, February 27-28, 1995, pgs. 196-212.	
	7	J. P. Rodgers et al., "Characterization of interdigitated electrode piezoelectric fiber composites under high electrical and mechanical loading," SPIE Vol. 2717, San Diego, CA, February 26-29, 1996, pgs. 642-659.	
	8	N. Hagood et al., "Improving transverse actuation of piezoceramics using interdigitated surface electrodes," SPIE Vol. 1917, 1993, pgs. 341-352.	
	9	A. A. Bent et al., "Anisotropic actuation with piezoelectric fiber composites," J. of Intelligent Material Systems and Structures, Vol. 6, May 1995, pgs. 338-349.	
	10	A. A. Bent et al., "Active fiber composites for structural actuation," January 1997, pgs. 1-209.	

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